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Cholera Infantum

No. 5

Wm Gwathmey

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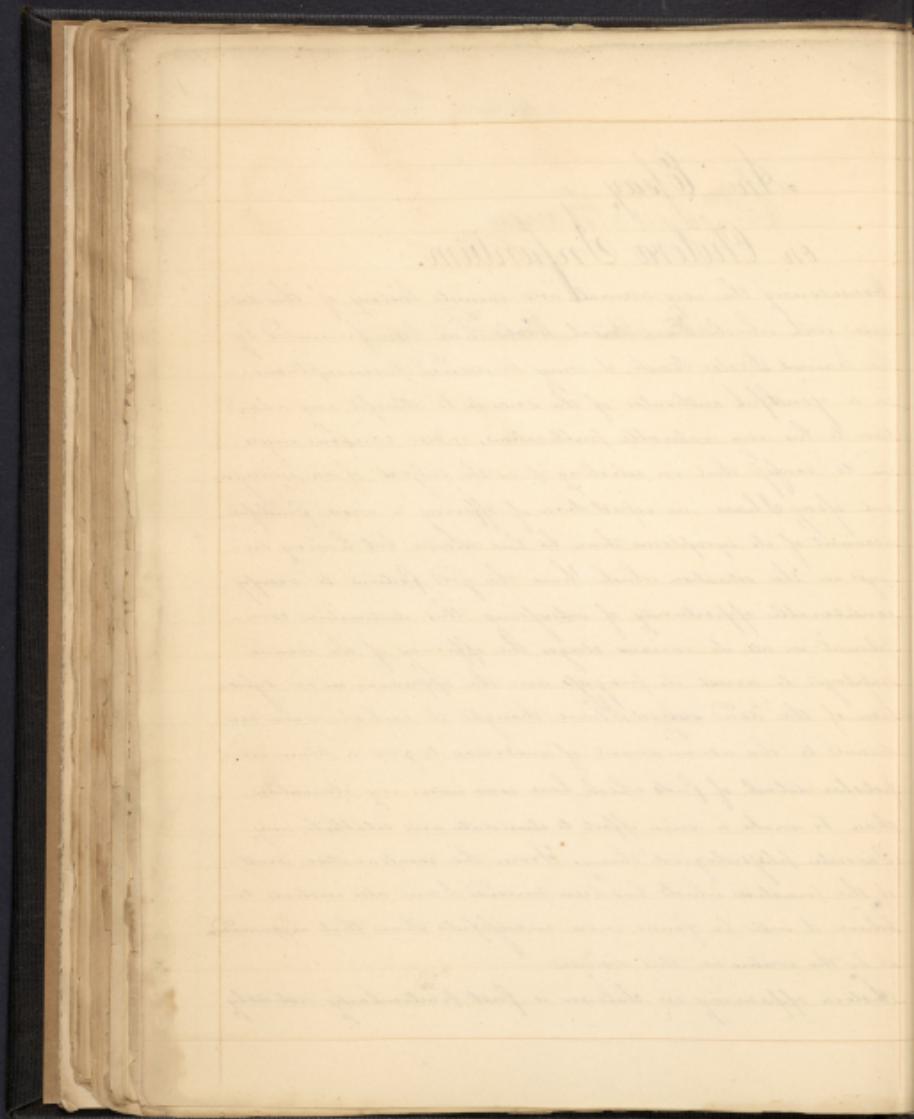
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An Essay on Cholera Infantum.

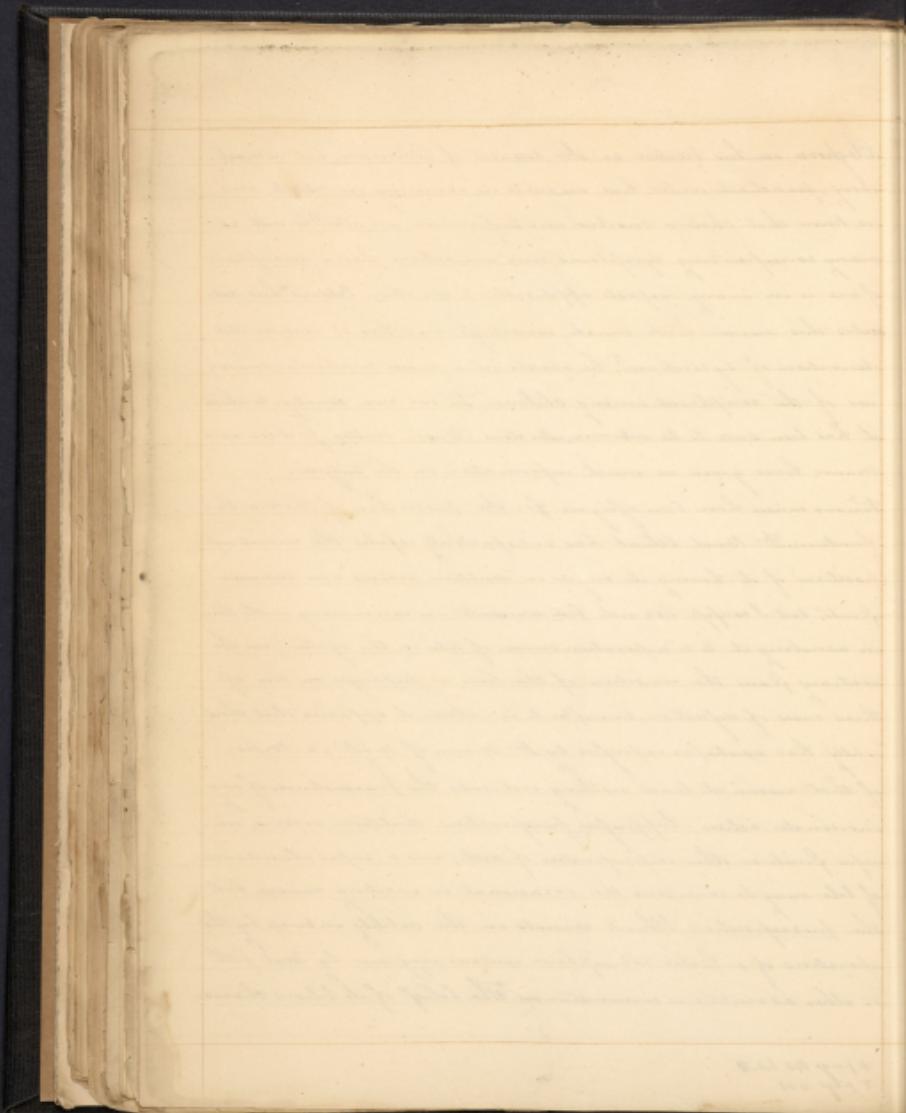
Considering the very accurate and minute history of this disease with which the medical world has been furnished by the learned Doctor Rush, it may be deemed presumptuous in a youthful cultivator of the science to attempt any addition to his very valuable publication; indeed candid inge-
nious to confess that in selecting it as the subject of an inaugura-
ral essay I have no expectation of offering a more faithful
account of its symptoms than he has already, but having en-
joyed in the situation which I have the good fortune to occupy
considerable opportunity of witnessing this destructive com-
plaint in all its various stages, the efficacy of the means
employed to arrest its progress and the appearance on depar-
ture of the said subject I have thought it perhaps more con-
ducive to the advancement of medicine to give a plain un-
polished detail of facts which have come under my observation,
than to make a vain effort to elucidate and establish any
favorite physiological theory. From the comparative result
of the practice which has been pursued I am also inclined to
believe it will be found more effectual than that recommended
or by the writer on this disease.

Cholera appearing in children is first particularly noticed by



Cleghorn in his treatise on the diseases of Minerals, but almost every practical writer has described it occurring in adults, and we know that cholera morbus and Infection are attended with so many corresponding symptoms and indications that a description of one is in many respects applicable to the other. Cleghorn describes this disease with much correctness, nor has it escaped the observation of Sydenham; he speaks in a more particular manner of the complaint among children. In our own country, to which it has been said to be endemic, Doctors Bush, Mallett, Jackson and Mason have given us much information on the subject.

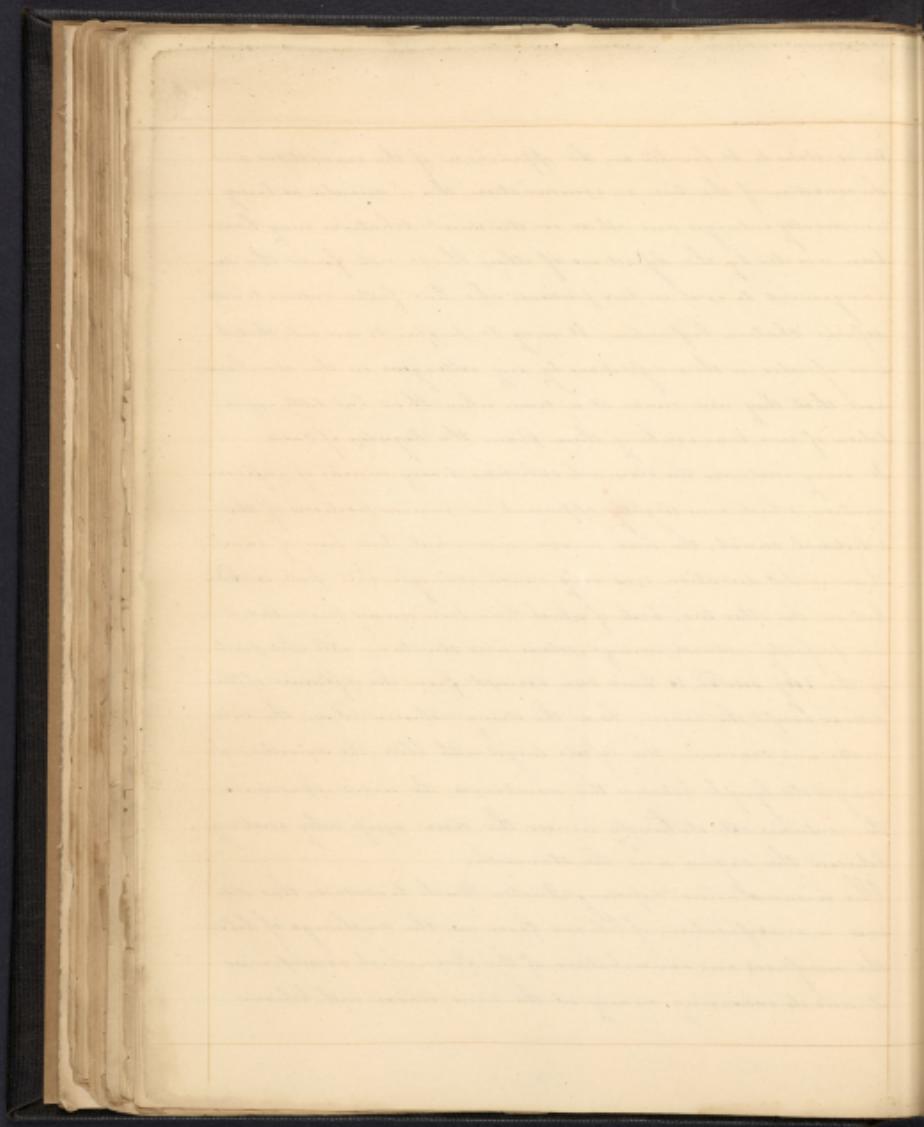
Various causes have been assigned for the production of Distraught Infants. Dr. Bush I think has satisfactorily refuted the several suppositions of it having its origin in "contusion, worms and unripe fruits," but I confess I do not feel warranted in concurring with him in ascribing it to a "superabundance of bile in the system;" on the contrary from the condition of the liver as displayed in two of three cases of affection, hereafter to be detailed, I apprehend that there really has existed (as I suppose by Dr. Mason of Norfolk) a torpor of that viscous, at least nothing intreats the pre-existence of any invulsive action. Impaired perspiration, dentition, worms, unripe fruits or other indiscretions of diet, and a superabundance of bile may be considered the occasional or exciting causes, but the predisposition I think consists in the activity induced by the operation of a heated atmosphere rendered impure by local filth or other associations circumstances. The belief of the disease charac-



It is safe to be founded on the appearance of the evacuations and the condition of the liver on examination; this is described as being universally enlarged and either in structure. Whatever may have been recorded by the spectators of others I have not found this arrangement to exist in two patients who had fallen victims to the disease Cholera Infantum. It may be proper to remark that I was present in these afflictions by my colleagues in the almshouse and that they were made at a time when I had but little application of our transcribing them from the Register of Cases.

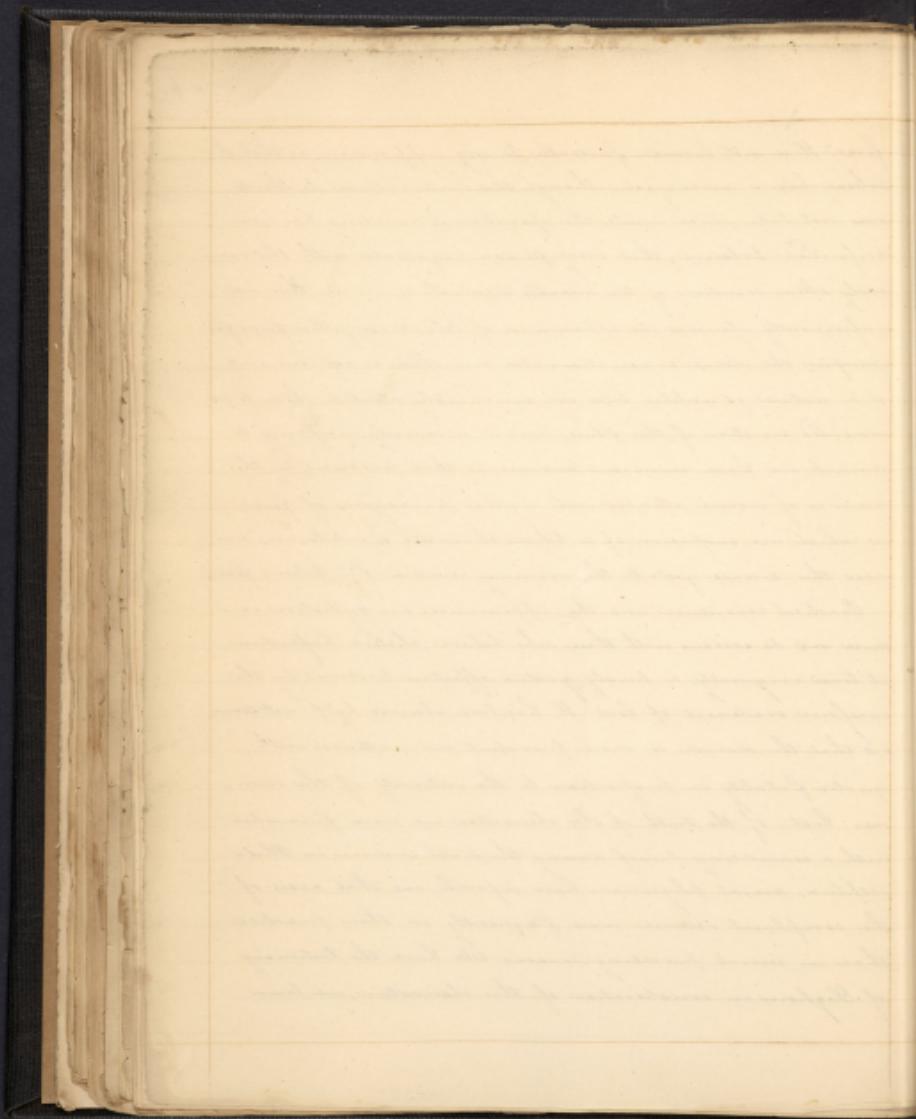
In every instance the stomach exhibits strong marks of inflammation, which was slightly apparent in various positions of the intestinal canal, the liver in one case which had been of near three weeks duration was very much enlarged and pale colored, but in the other two, both of which had been equally protracted, it was perfectly natural in size, colour and structure. All the parts of the body seemed to have been exempt from the influence of the disease except the brain; here the strong adhesion between the meninges and cranium, the vessels turgid with blood, the deposition of coagulated lymph between the membranes, the serous effusions in the ventricles, all strikingly evince the close sympathy existing between this organ and the stomach.

The circumstances suspending Doctor Rush to consider this disease a mortification of bilious fæces as the discharge of bile, the semipus and excretions of the fæces which accompanies it and its occurring nearly at the same season with bilious



fever. It is not however favorable to my supposition, or that I believe bile is never ejected (though this I am inclined to think does not take place until the operation of vomiting has been performed). I observe, that every person acquainted with the various secretions of the descended stomach is aware this not unfrequently observes the appearance of bile (as in yellow fever for example) the chlorine evaporation also are often so copious and of a nature so unlike bile we can hardly attribute them to an increased secretion of this fluid; and it is scarcely necessary to remark we have numerous diseases (as those produced by the presence of worms) attended with regular paroxysms of fever in which no suspicion of a bilious character is entertained; nor does this disease yield to the ordinary remedies for bilious fevers.

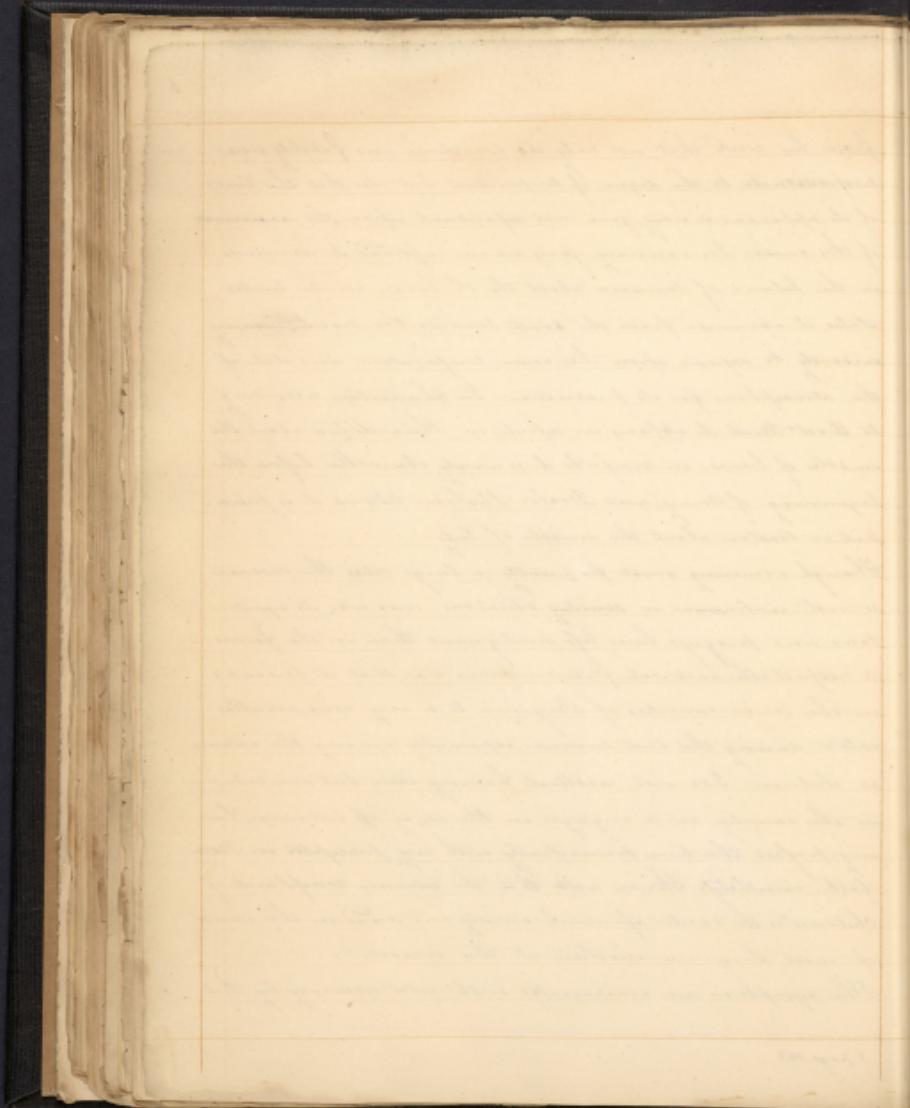
Prudential experience and the appearances in affection induce me to concur with those who believe cholera infantum, at least originally, a purely gastric affection produced by the explosive excretion of bile. It has been observed by practitioners that the disease is more prevalent and attended with greater fatality in proportion to the intensity of the vomited bile. Of the truth of this observation we were furnished with a convincing proof during the past summer in Philadelphia, several physicians have informed me that cases of the complaint occurred more frequently in their practice than in several preceding seasons. We have the testimony of Bigelow in corroboration of this observation, we leave



from his work that not only its prevalence and fatality were proportionate to the degree of temperature but also that the time of its appearance every year was dependent upon the recurrence of this cancer. In ordinary years we are informed it commences in the Island of Minorca about the 1st June; in the United States it advances from the south towards the north, recurring evidently to depend upon the same temperature and state of the atmosphere for its presentation. In Charleston according to Doctor Bush it appears in April; in Philadelphia about the middle of June; in Norfolk it is rarely observable before the beginning of May; and Doctor Jackson tells us it is prevalent in Boston about the middle of July.

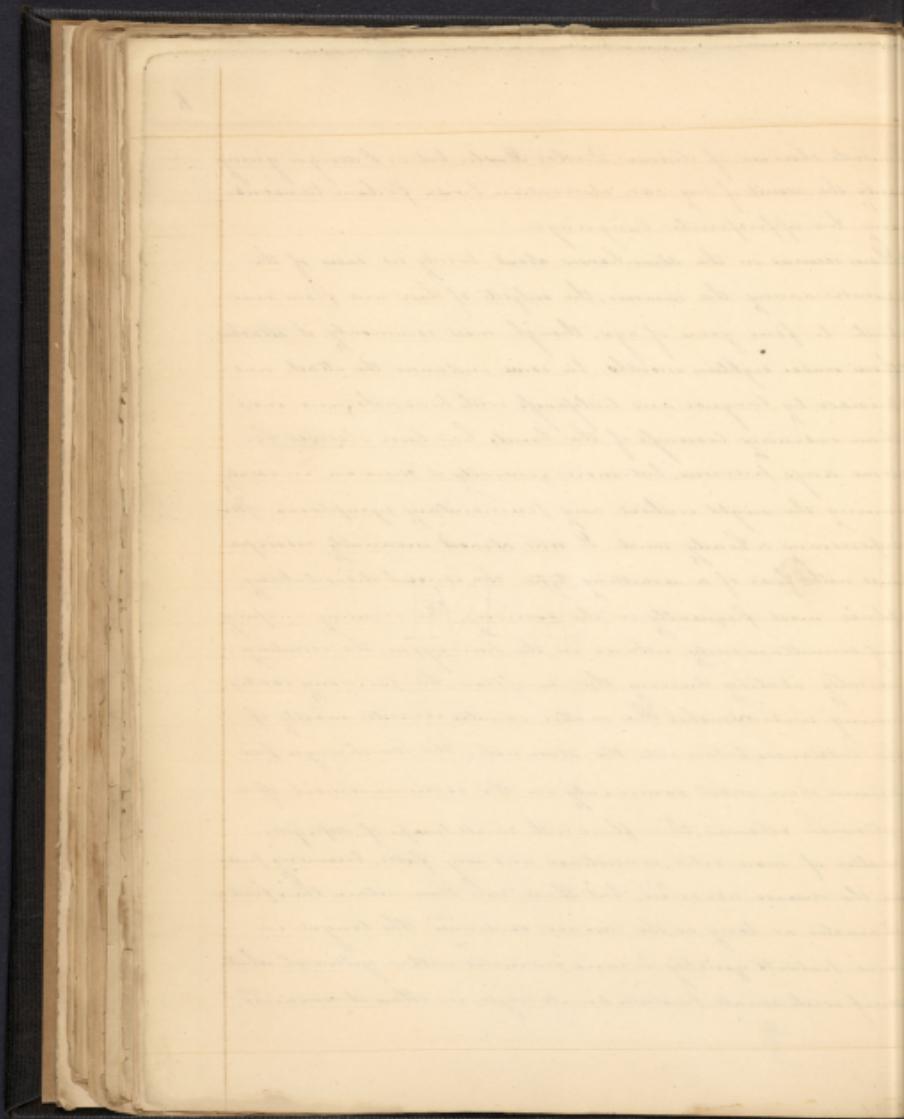
Though occurring most frequently in large cities the disease is not unknown in country situations, nor are its symptoms and progress here less malignant than in the former. A respectable medical friend informs me that it prevailed in the lower counties of Virginia to a very considerable extent during the last summer, especially among the eastern children. I do not recollect having seen but one case in the country since my age in the study of medicine, having passed the time principally with my preceptor in New York; nevertheless I know well that "the summer complaint of children" is the bane of much anxiety and dread in the minds of most Virginia mothers at this season.

The symptoms are enumerated with great accuracy by that



minute observer of disease. Doctor Bush, but as I design giving only the result of my own observation will forbear transcribing his appropriate language.

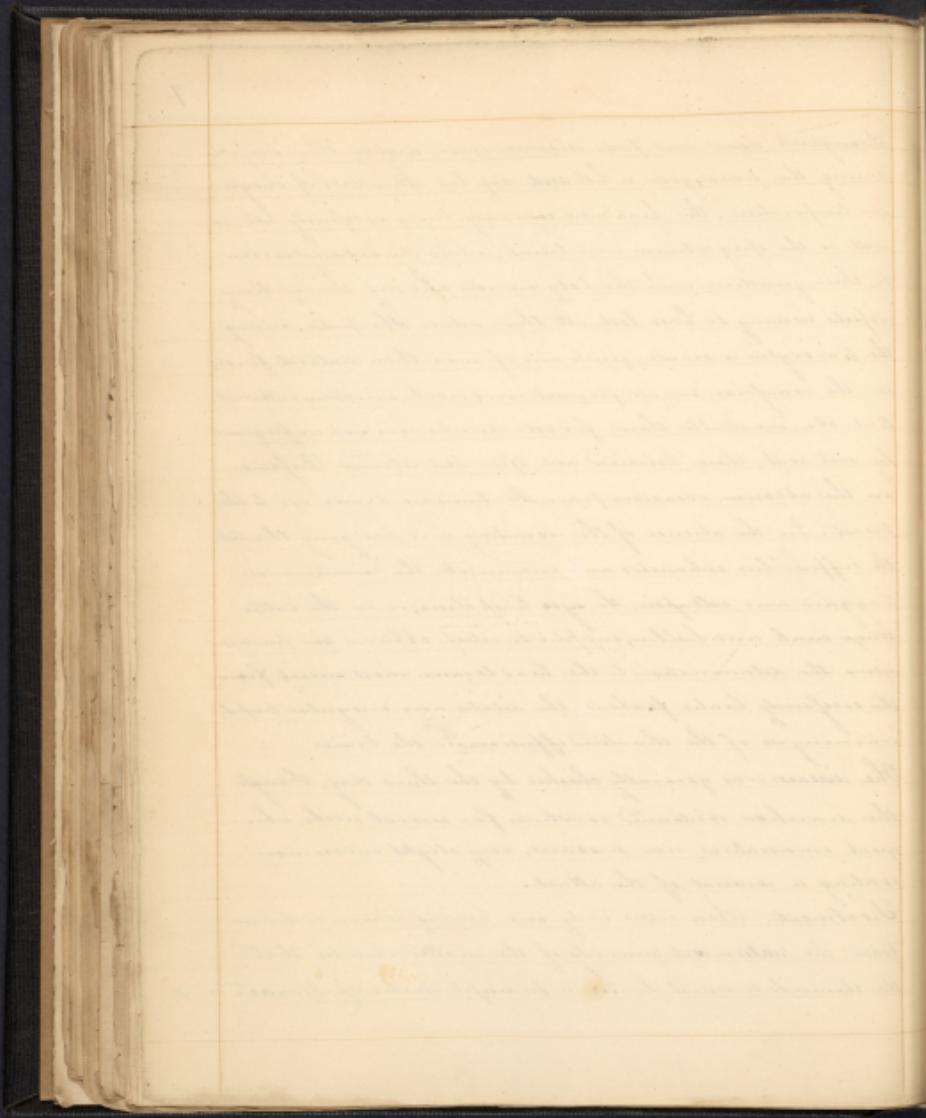
There occurs in the slave-homes about twenty six cases of the disease during the summer; the subjects of these are from near birth to four years of age, though most commonly it attacks those under eighteen months. In some instances the attack was preceded by languor and listlessness, with head-ache, and more than ordinary looseness of the bowels had been observed for some days previous, but more generally it comes on suddenly during the night without any premonitory symptoms, after supping a hearty meal. It was almost invariably accompanied with fits of a remitting type, the exacerbations taking place most frequently in the evening. The vomiting and purging simultaneously occurs in the paroxysm, the vomiting usually abating during the convulsion, the purging continuing undiminished. The matter vomited consists mostly of the substances taken into the stomach, the discharges however were most commonly in the commencement of a yellowish colour, thin fluid with small tufts of stiff green matter of more solid consistency and very fetid, becoming paler as the disease advanced, but these even then retain their first character as long as the disease continued. The tongue in some patients quickly becomes incrustated with a yellowish white scurf with venous fuscules on its edges, in others it remained



throughout clear and pale colour as in asphyx. The surface during the paroxysm is hot and dry, but afterwards of unequal temperature, the head more especially being especially hot, as well as the spinal column and trunk, while the extremities even to their junction with the body are cold and dry, the capillary vessels seeming to have lost all their action. The pulse during the paroxysm is small, quick and of more than natural force; in the remission somewhat frequent and weak, sometimes intermittent. An inevitable thirst for cold drinks was not infrequent, by me with these I observed more often but retained. Prefers in the abdomen occasions pain, the knees are drawn up to the breast. In the absence of the vomiting and purging the lid the sufferer lies exhausted and inanimate, the countenance haggard and pale, the eyes half closed, or in the latter stages sunken and hollow, supplicate relief. After a few paroxysms the determination to the head becomes most evident from the especially heats forehead, the dilated and irregular pupils, warning us of the threatened effusion in the brain.

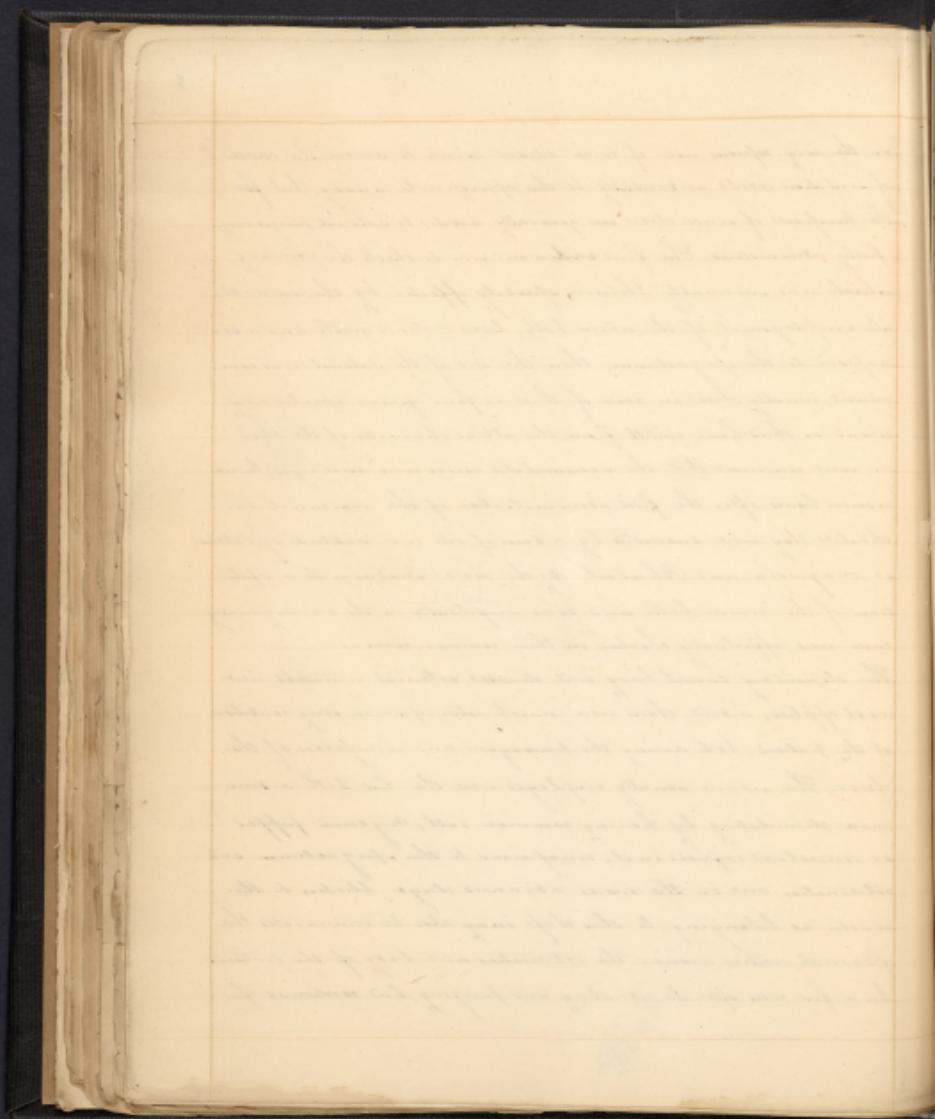
The disease was generally checked by the third day, though the diaphragm continued sometimes for several weeks, when great emaciation was produced, very slight crises now exciting a renewal of the attack.

Treatment. When called early and having reason to believe from the nature and quantity of the matter vomited that the stomach is much loaded, a prompt emetic of Senna^o



or the very copious use of some diuretic drink to remove the cause of irritation would undoubtedly be the appropriate remedy, but for the purpose of evacuation we generally resorted to calomel purgatives freely administered. The first endeavours were to check the vomiting, which was invariably believed, speedily effected by the immediate employment of the warm bath, lime water & salts and a stimulus to the epigastrium; then the use of the Calomel was commenced, usually alone in doses of three or four grains repeated every second or third hour, until from the altered character of the stool we were convinced that the accumulated causes were discharged. In six or seven hours after the first administration of the mercurial cathartics they were succeeded by a dose of oil or a mixture of Calomel & magnesia and Balsalac. By the above remedies with a repetition of the warm bath and some aperients in the evening many cases were effectively checked in their commencement.

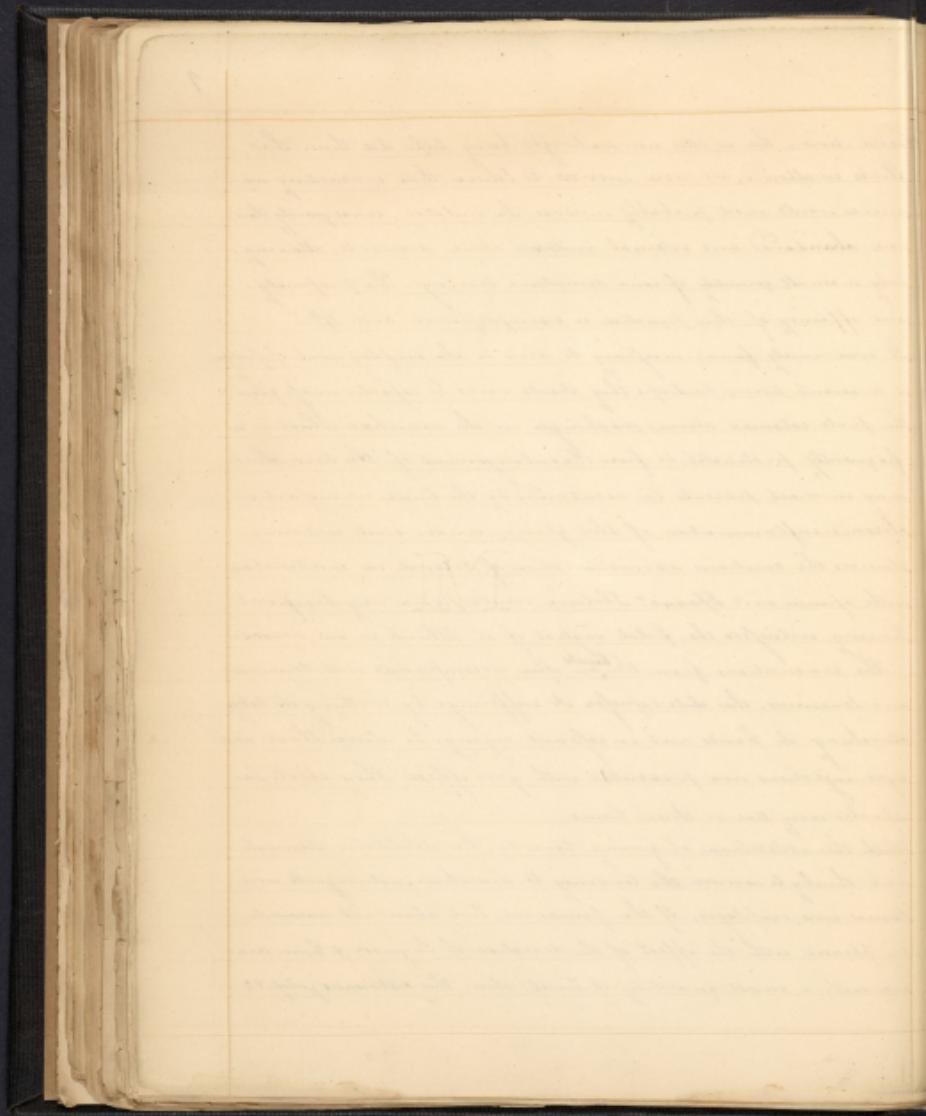
The alimentary canal being well cleaned, external irritants were next applied, indeed there were much relied upon in every condition of the patient, both during the paroxysm and remissions of the fever. The means usually employed were the hot bath rendered more stimulating by having common salt, bayonne pepper or mustard infused in it, stimulations to the epigastrium and sternum and in the more advanced stage blisters to the wrists. as belonging to this class may also be enumerated the flannel rollers around the sternum and body of the patients. In a few cases after the vomiting and purging had continued for



some time, the smaller non-discharge being little else than the fluids swallowed, we were induced to believe that evacuating enemas would most probably increase the irritation; consequently these were abandoned and external irritants alone resorted to, allowing only a small quantity of cane demulcent beverage. The propriety and efficacy of this practice is exemplified in case 4th. It was rarely found necessary to recur to the employment of purgatives a second time; perhaps they should never be repeated until from the pale coloured albumen discharges in the diarrhoea which so frequently protracted, or from the enlargement of the liver which may in most patients be ascertained by the hand, we suspect a chronic inflammation of this gland; under such circumstances the cautious administration of Calomel in combination with opium and Sassafras I believe would prove very beneficial. Having witnessed the fatal neglect of it I think in one patient.

The evacuations from the ^{bowels} are often accompanied with torments and tenesmus, the child expresses its sufferings by writhing its body, clutching its hands and incessant crying. To relieve these acute ague injections were prescribed with good effect. They should be injected every two or three hours.

With the intention of giving tone to the debilitated stomach and thereby to remove the tendency to diarrhoea, astringents and tonics were employed; of the former we had abundant reason to be pleased with the effect of the decoction of Logwood & Camphoratic with a small quantity of Linseed oil, the astringent jerked &c.



given immediately after each stool, one of the latter we can with most advantage the Comp^t Inst^t Gentins combined with mucus sage and sweetened in small and frequently repeated doses.

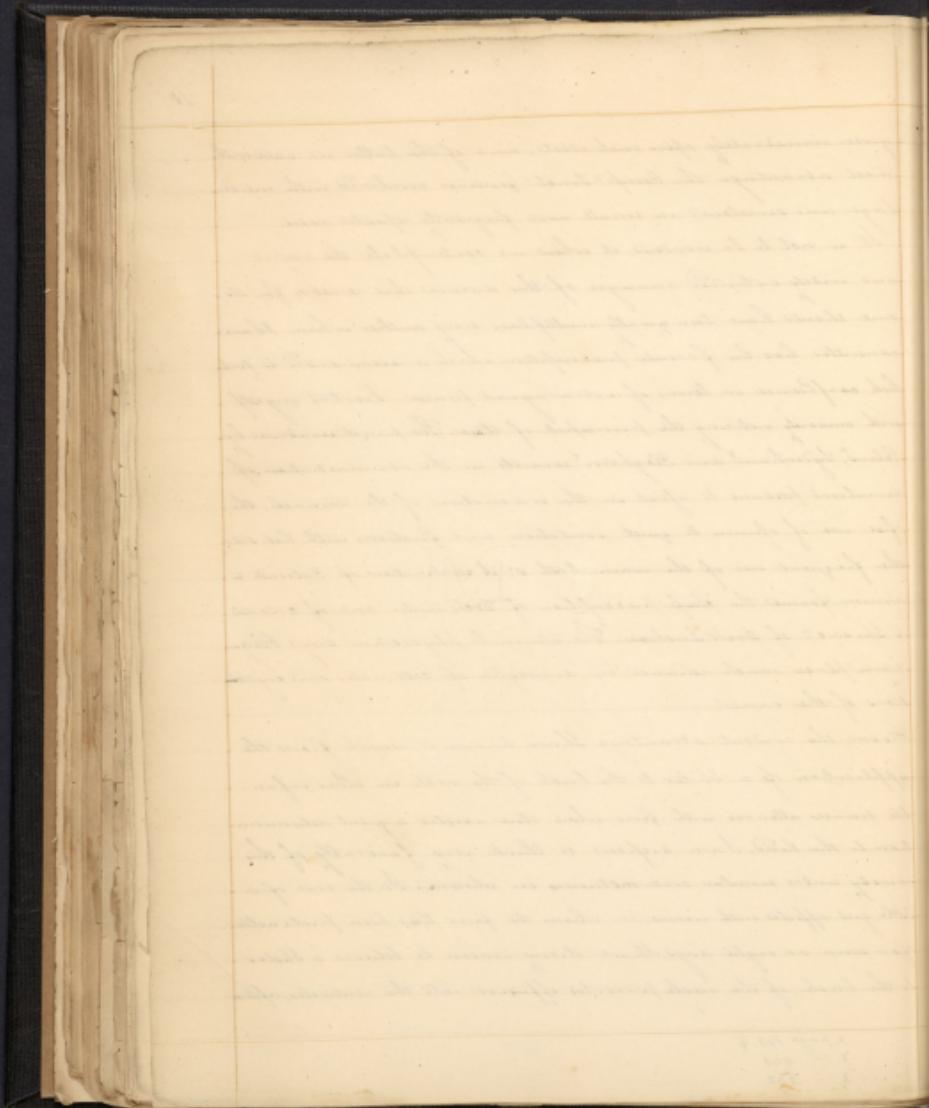
It is not to be wondered at when we contemplate the rapid and mostly extended courses of this disease that remedies for its cure should have been greatly multiplied; every author whom I have consulted has his favorite prescription which is recommended to publish confidence in terms of extravigant praise. Content myself with cursorily noticing the principle of these. The practice advised by Belus, Tyronians^t and Blaghorn^t consists in the administration of emollient purgatives to assist in the evacuation of the stomach, the free use of opium to quiet irritation and fictions with hot sitz, the frequent use of the warm bath &c. A combination of Colomint & Senna formed the chief prescription of Dr. H. Miller, and of a lancet & the oint^t of Dr. St. Lovibond. The Spanish physician says Blaghorn places much reliance in draughts of cold water and injections of the same.

From the evident advantage Shreve known to result from the application of a blister to the back of the neck in other inflammatory diseases attended with fever where there exists a great determination to the head, I am disposed to think very favorably of this remedy under similar circumstances in cholera. In the case of a little girl affected with worms, in whom the fever had been protracted for seven or eight days, Shreve strong reason to believe a blister to the back of the neck prevented effusion into the ventricles, after

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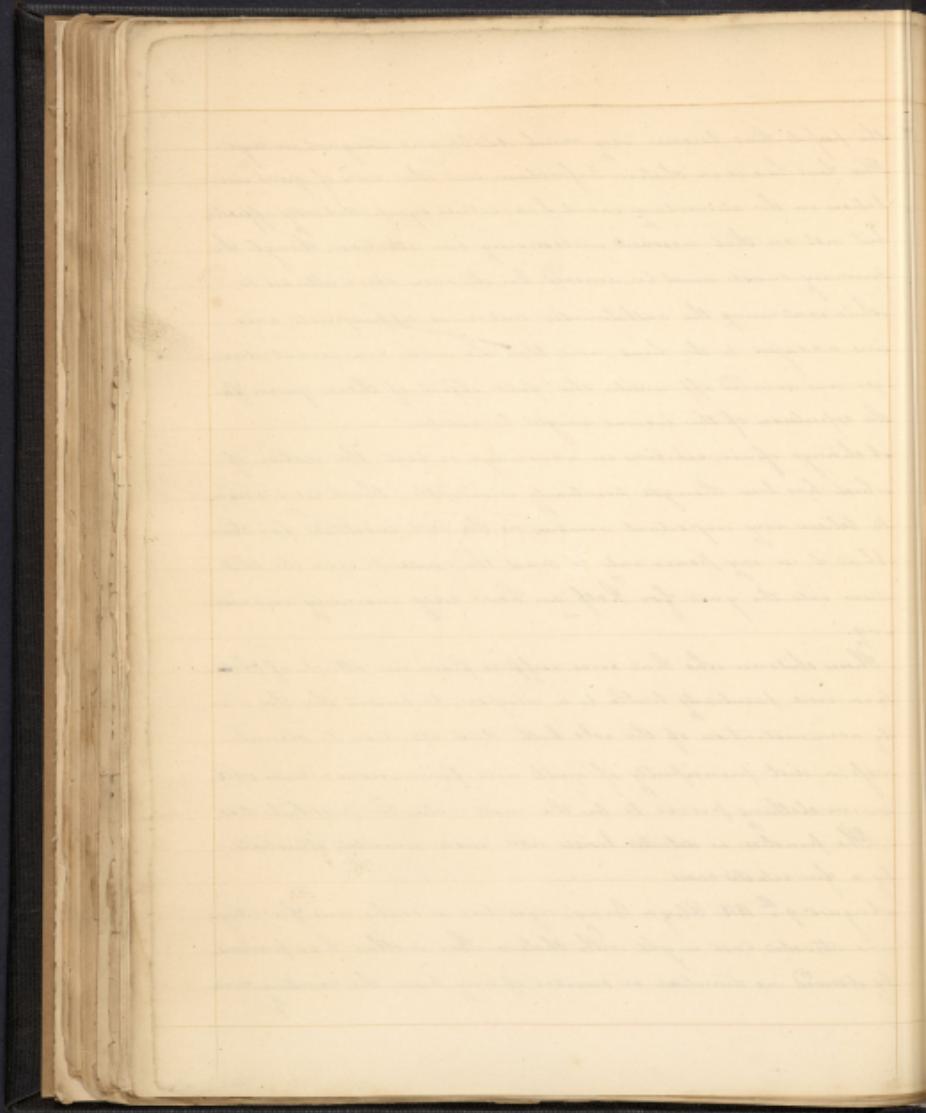
the patient has become very much distended and unequal in size. The head here as in Cholera Infantum and other cases of great inflation in the elementary cannot I considered sympathetic affected, but not on that account unmeriting our attention, though the primary cause must be removed. In the case above alluded to while continuing the anthelmintic medicines, appropriate ones were added to the head, and thus the more imminent danger was ward off until the full effect of these given for the expulsion of the worms might be exerted.

A change of air, exercise in a carriage or boat, the motion of which has been thought peculiarly serviceable, shew every reason to believe very important remedial, as the best substitute for those that it is my power only to direct the nurse to send the children into the yard for half an hour every morning and evening.

Those children who had once suffered from an attack of cholera are peculiarly liable to a relapse; to prevent this the daily administration of the cold bath, strict attention to cleanliness, a diet principally of milk and farinaceous articles, warm clothing proves to be the most valuable prophylactic.

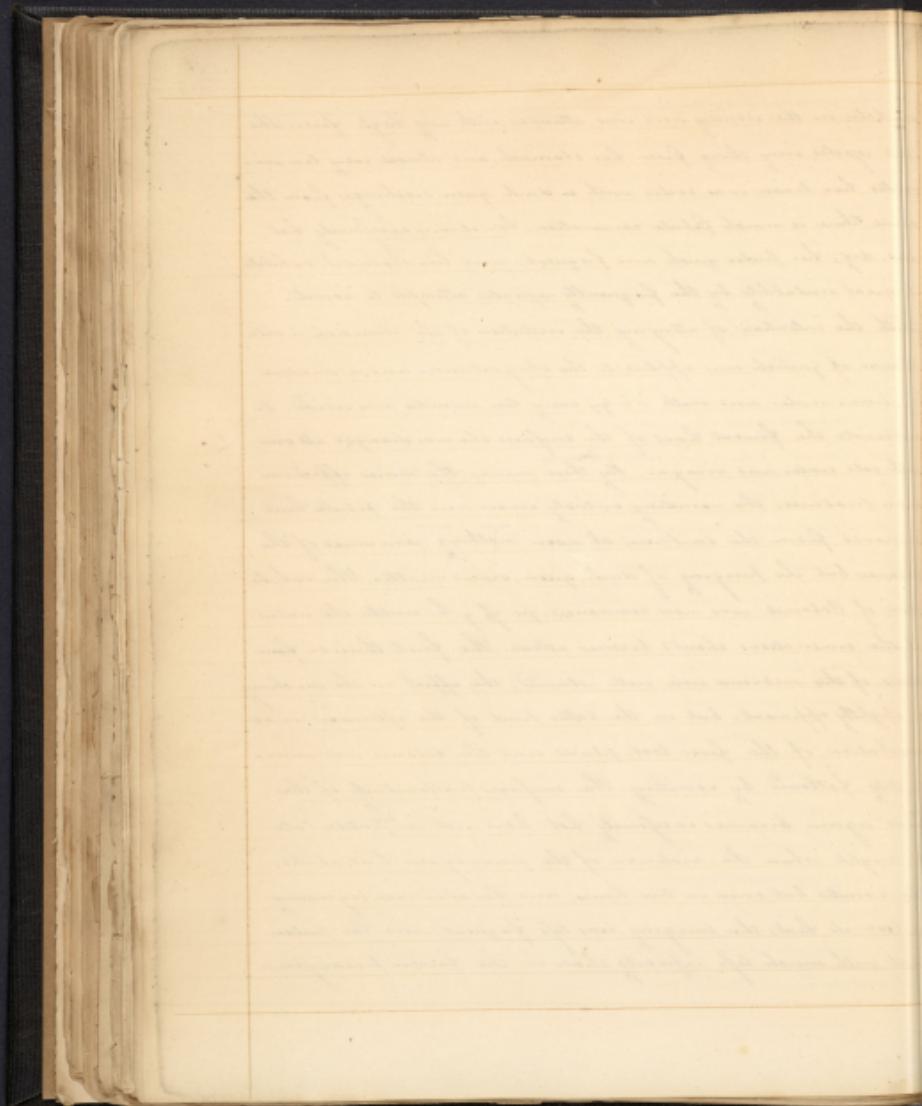
The practice as detailed will now more minutely illustrated by a few selected cases.

August 7th A.M. Eliza Gray, aged two months and five days, was attacked last night with Cholera. Her mother had previously observed no diarrhoea or sickness of any kind; the vomiting came



on late in the evening and was attended with very high fever. She has ejected every thing from her stomach, and almost every ten minutes her linen was soiled with a dark green discharge from the anus. There is much fetid excretion, her skin is excessively hot and dry. Her pulse quick and frequent, and her stomach exhibits its great irritability by the frequently repeated attempts to vomit.

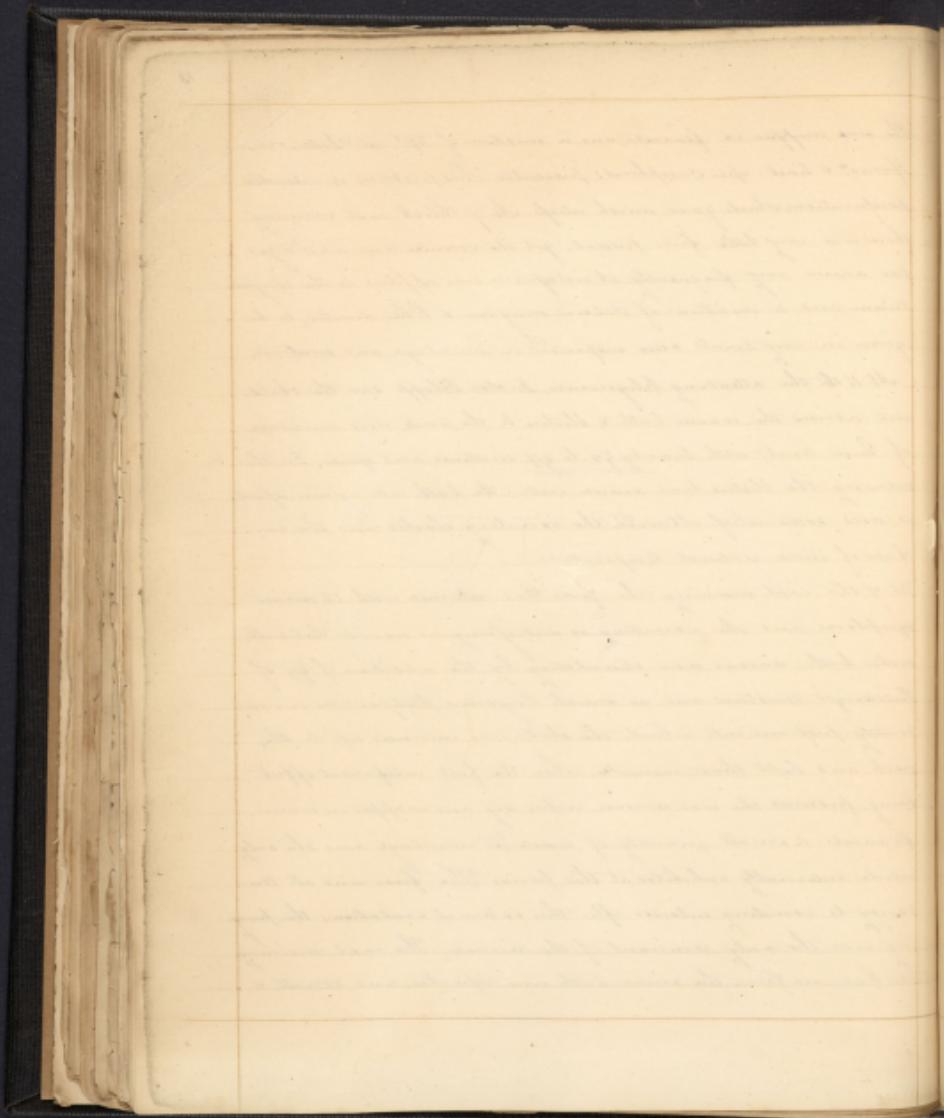
With the intention of allaying the irritation of the stomach a cataplasma of garlic was applied to the epigastrium and a mixture of lime water and salt a dr. ijg every ten minutes was applied. To moderate the ferment heat of the surface she was fanned all over with cold water and vinegar. By these means the diuresis effect was soon produced; the vomiting entirely ceased and the fetid heat removed from the surfaces; at noon nothing remained of the disease but the purging of dark, green, viscid matter. The exhibition of Calomel now commences, jis. ijg. b. until the nature of the evacuations should become altered. The first three or four doses of this medicine were well retained, the effect on the discharge is slightly apparent, but in the latter part of the afternoon an exacerbation of the fever took place and the calomel was immediately followed by vomiting. The surface particularly of the head again became excessively hot. This is not ^{so} excretive late at night when the violence of the paroxysm had abated, she vomited but once in two hours, and her skin was beginning to lose its heat; the purging was less frequent, and her pulse beat with much less rapidity than in the former paroxysm.



The next evening ice flannels and a mixture of Hot water, rice, Specas & Linet. oil Camphorated presented. This produced considerable perspiration, which gave much relief. As of black night morning there was very little fever present, yet she vomited and discharged per anum very frequently & spongia was applied to the epigastrium and a mixture of Colicin magnes. & Rhei directed, to be given in very small doses suspended in mintage and sweetened.

At 11 A.M. the attending physician, Doctor Bluff saw the child and advised the warm bath & blisters to the wrists, and mintage of Cam. arab. with brandy $\frac{1}{2}$ oz to $\frac{1}{2}$ pint sweetened and spiced. In the evening the blisters had drawn well, the bath was again repeated and some relief obtained, the vomiting checked and the surface of more natural temperature.

At 7 the next morning the fever had returned with its usual symptoms and the vomiting as distressing as ever. A hot salt water bath, rendered more stimulating by the addition of $\frac{1}{2}$ oz of Butterworts Mustard and as much Cayenne pepper was immediately prepared, into which the child was immersed up to the neck and left three minutes, when the full refrigerant effect being produced she was removed, wiped dry and wrapped in warm flannel. A small quantity of sweetened mintage was the only article internally exhibited at this period. The fever and all tendency to vomiting subsided after this external irritation, the purging was the only remnant of the disease. The next morning she had no fever, the same bath was repeated, and small &



frequently repeated doses of the following mixture prescribed.
Op. musc. gr. 3, Spt. cal. gr. 3, Tinct. berberis. Compot. 3g. Sacch. ab. gr. 10.
The warm bath was caused to be repeated every night at bed time, and the medicine last mentioned continued. The diarrhea was thus in a few days removed, and she escaped the disease through the remainder of the season.

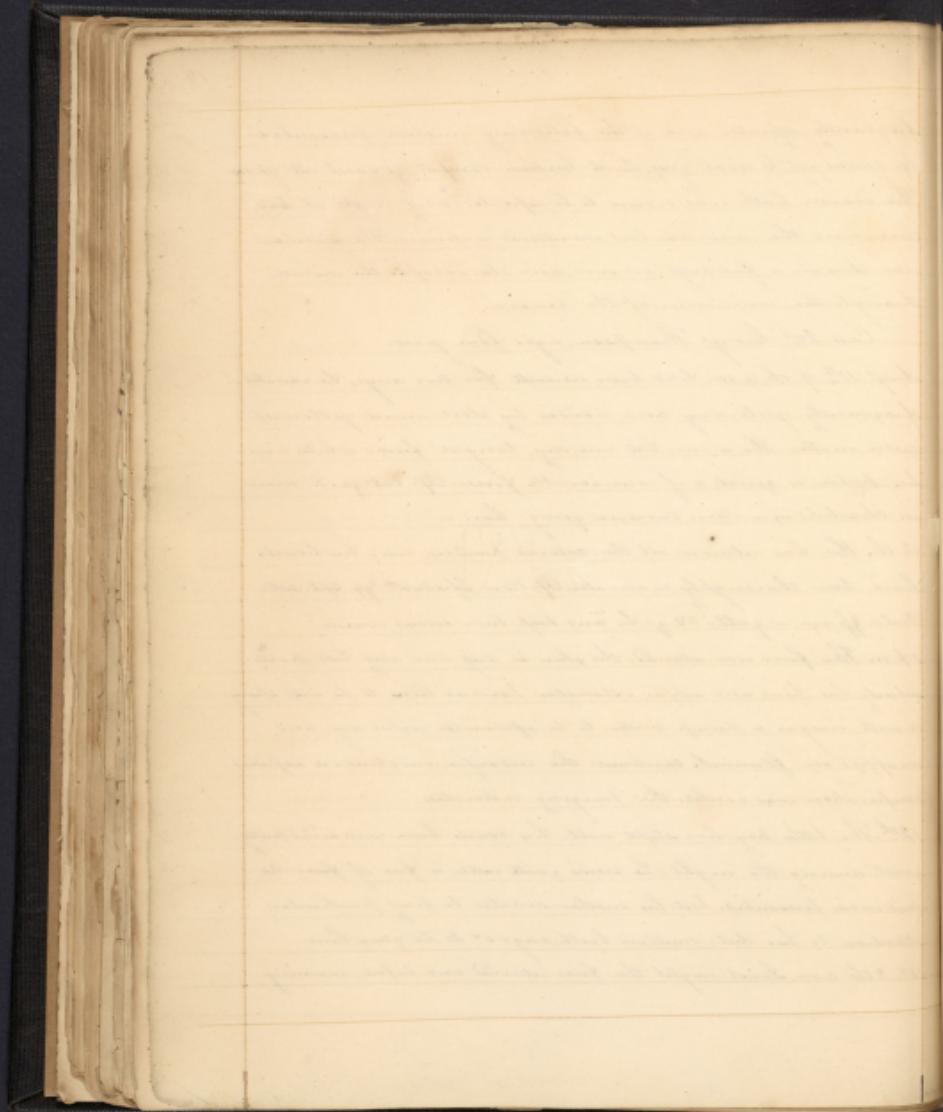
Case 2^o George Thompson, aged four years.
Augt 14th of 1812 a.m. had been unwell for two days, he vomited frequently yesterday and voided by stool much yellowish green matter. He is now hot all day, tongue furred white and his pulse is quick & of considerable force. Op. Cal. gr. 3. avis in chartul. iij in vino summi: grana: hor:

12 A.M. He has received all the calomel powders, and his bowels have been thoroughly evacuated. Op. nov. Speciat. gr. 3, Spt. nitro. Dulc. gr. 10. - gall. 2V of L. and keep him covered warm.

6 p.m. His fever was returned, the skin is dry and very hot, particularly his head and upper extremities. Ordered him to be well sponge d with vinegar & pump water, to be afterwards wiped dry and wrapped in flannel, contains the sulphur mixture. a copious perspiration was excited, the purging moderated.

12th The little boy has slept well. His bowels have remained pretty quiet during the night. He seems quite well, is free of fever. No medicine prescribed, but his mother directed to pay particular attention to his diet; mutton broth, sage &c to be given him.

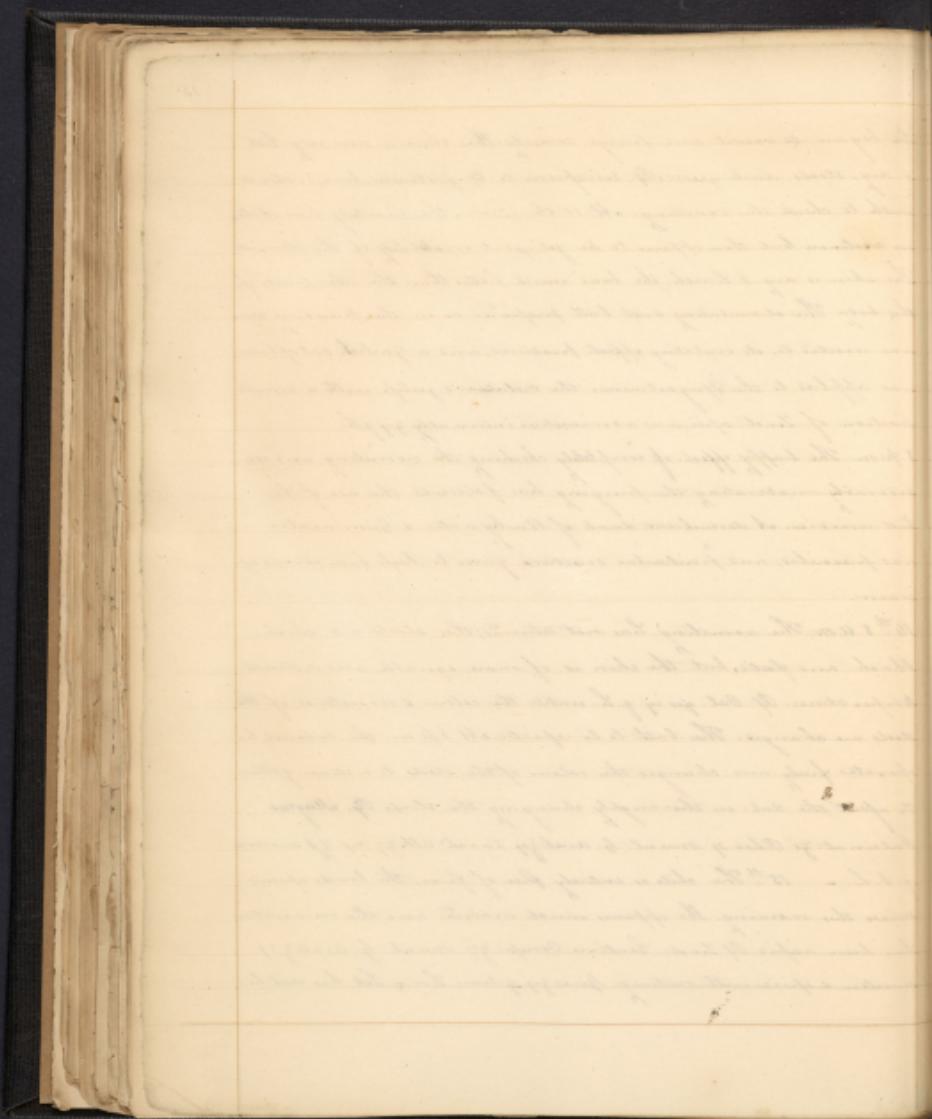
13th 8 A.M. Least night the fever returned and before morning



He began to vomit and purges severely. His skin is now very hot & dry, stools dark green. Of Eupatorium to Spigotatum, time is often too much to check the vomiting. At 10th A.M. the vomiting has abated in violence but there appears to be yet great irritability of the stomach. The skin is dry & hot, the heat much hotter than the other parts of the body. The stimulating bath both prepared as in the preceding case was resorted to. Its irritating effect produced, and a gastral cataplasm was applied to the Spigotatum, the Octobatus jupili with a small portion of Linct. opii was administered internally $\frac{1}{2}$ g. i. g. h.

8 P.M. The huffy effect of completely checking the vomiting has soon, considerably moderating the purging has followed the use of the last reme^{dy}. A demulcent bath of Bals. water & Glycerine abate was preferable, and particular directions given to keep him cool & dry.

16th 8 A.M. The vomiting has not returned; the stools are thick, black and pasty, but the skin is of more equable and natural temperature. Of Cal. gas if g. h. until the colour & consistence of the stools are changed. The bath to be repeated at 8 P.M. the Eupatorium operates fully and changes the colour of the stools to a straw yellow. To assist the Cal. in thoroughly changing the stools of Magoges Salvia at $\frac{1}{2}$ g. Rhubarb if small 1 lb. and 1/2 g. i. g. h. 3 P.M. sunnif g. b. h. a. 15th The skin is entirely free of fever, the bowels opened twice this morning. He appears much relieved and the convulsion has been ceas'd. Of Linct. Gentian; Balsap; $\frac{1}{2}$ g. small 1/2 oz. 3/4 g. sweeten & spice with orationy. Give $\frac{1}{2}$ g. q.d. Let his diet be



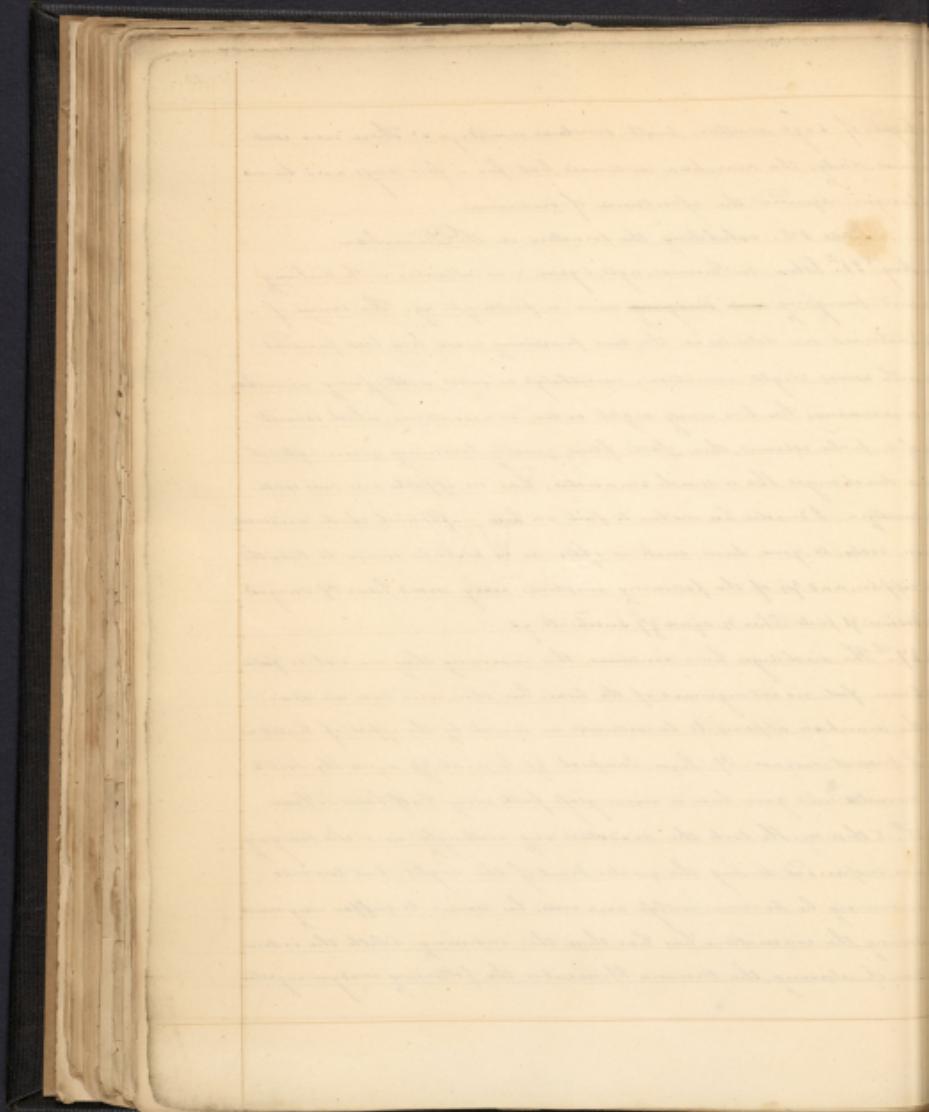
light, of sage, mutton broth, sweetened orange juice &c. These were continued daily; the diarrhoea continues but for a few days, and he no longer required the assistance of medicines.

Case 18. exhibiting the practice in the Diarrhoea.

Aug^t. 18th. John M. Barnes, aged 1 year, was attacked with purging and purging — ~~— purging~~ — near a fortnight ago. The course of treatment as detailed in the two preceding cases has been pursued with some slight variation, nevertheless a most distressing diarrhoea remains; he has daily eight or ten evacuations, which consist of a pale colour, thin, pale fluid gradually becoming green after it is discharged. He is much emaciated, has no appetite and over continually. I directed his mother to put on him a flannel sheet underwood on soaks; to give him such as often as he seems to make to take the nappies, and 3/4 of the following mixture every second hour of strong cold water 31 parts Rhei 3/4 aqua 3/4 sarsaparilla 1/2 qt.

27th The discharges have continued; this morning they are not so full I can feel no enlargement of the liver. His skin and eyes are clear; the diarrhoea appears to be continued as much by the effect of habit as of present disease. Of Lax. Campeachy 3/4 lb. arat. 3/4 aqua 1/2, boil 2 minutes and give him a wine glass full every half hour or hour.

28th 8 A.M. He took the aperient very willingly and the purging was suspended during the greater part of the night, but towards morning he became restless and sick; he seems to suffer very much during the evacuations. Has had three this morning. With the intention of relieving the torments I prescribed the following analysed injection



ow. of. Linet opn $\frac{1}{2}$ lb. vomiting & wat. gr. w^t. Digest half and the remainder in two hours if the purging does not occur. Continue the aecol. Campeach:

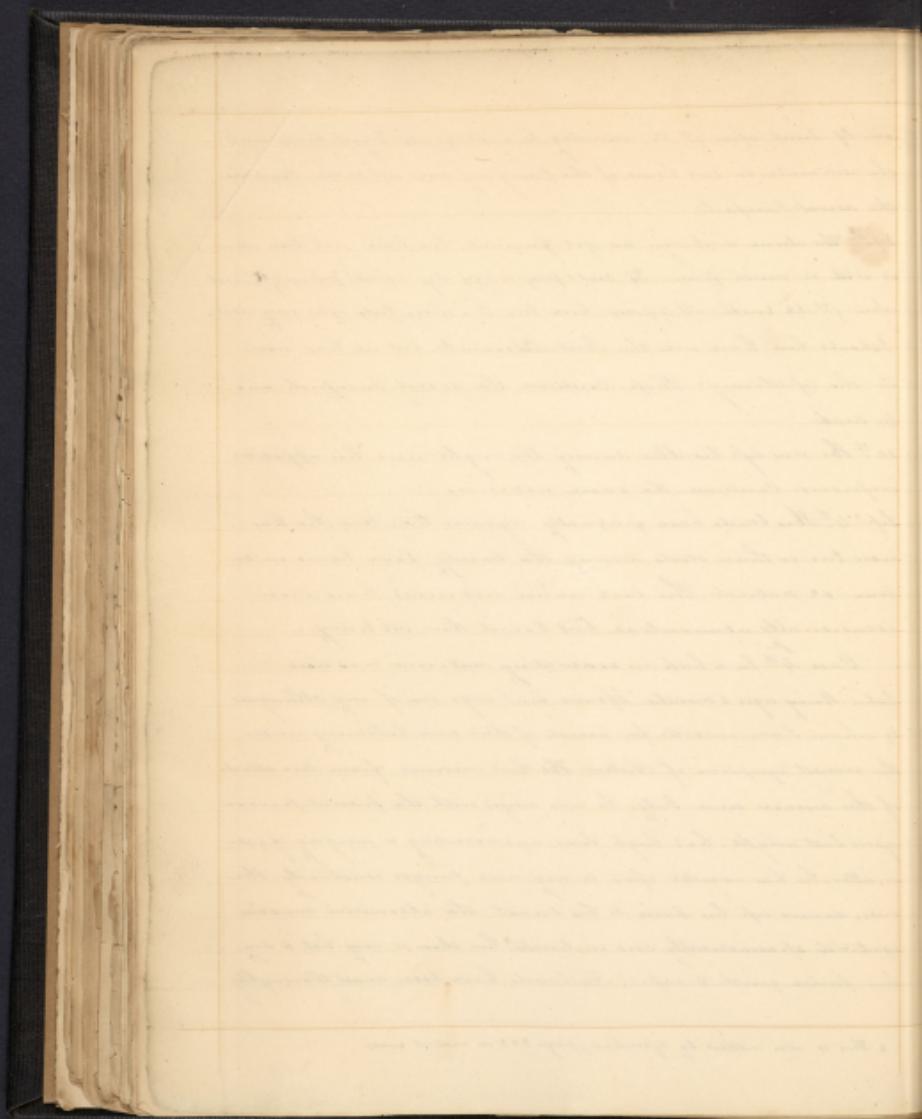
19th The above discharges are yet frequent, but have not been attended with so much pain. Of cat. purg: gr. w^t. wrench: purg gr. 18 Linet opn $\frac{1}{2}$ lb. Sord: all y^t w^t. Give two tea-spoonfuls after every stool. Should here have used the Bubus Deamom: but we had none in the Apothecary's Shop. Continue the aecol. Campeach and gr. aecol:

20th He was up troubles during the night and his appetite improves. Continue the same medicines.

Sept 4th His bowels have gradually regaining their tone, he has now two or three stools during the twenty four hours in colour & natural. The last named medicines have been occasionally administered, but omitted them all today.

Case 4th In which no evacuating medicine was used.
John Bang age 5 months. Youns hin^t says one of my colleagues to whom I am indebted for several of these cases, labouring under the severest symptoms of Cholera. He had recovered from two attacks of this disease since July. He was seized with the present paroxysm last night. Had high fever, and vomiting & purging of green mucus; he has vomited often to day and purges constantly. The eyes, draws up his knees to his breast, the abdominal muscles contract spasmodically and in knots; his skin is very hot & dry, his pulse quick & rapid. His bowels have been most thoroughly

* This is also noticed by Tyzzerham (page 228) in violent cases.



exacerbated, so that purging cures are not here indicated. With a view to determine to the surface and thus relieve the abdominal irritation borders him to be placed into a bath of hot water into which either a handful of mustard or soda and as much powder'd mustard & Cayenne pepper as soon as a full refrigerant effect was discoverable had been removed, wiped dry and covered up in warm dry flannels and 25 of the following mixture given every half hour. Op. min. Spec. & g. St. Linal. opic Camph. 25g
Mucilage. 4g arabi. 3g Tons. Op. Epiphius. to rect. Op. Sinapi. to Epigastrium.

The next morning he was quite easy, and the purging over.
Repeat the warm bath and continue the above mixture.

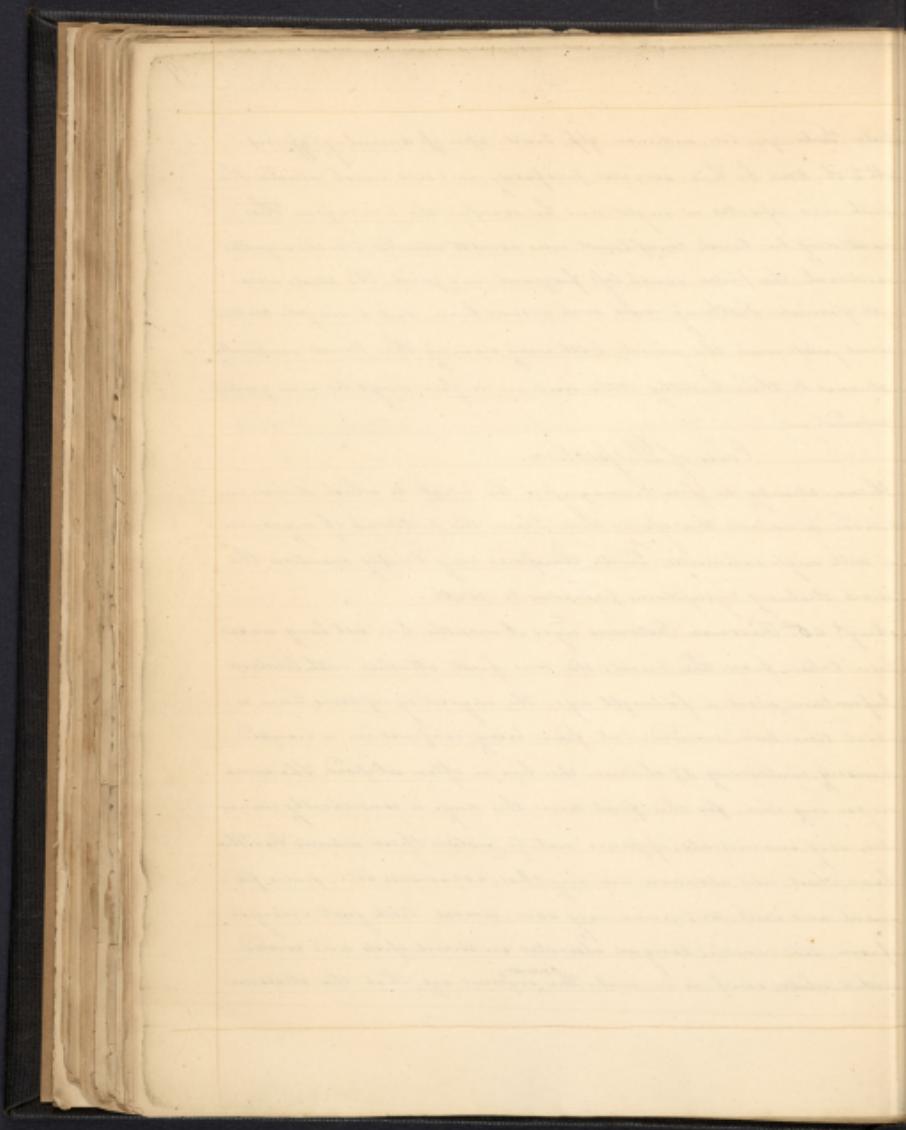
7 A.M. He has remained quiet and easy during the day, but the hot fomps and vomiting with great pain in the abdomen have returned; he screams violently and his head is very hot. Op. Ricini. 3g Sennet. opic g. Vi. g. gentian. Op. Mucilage. G. arabi. 3g St. Linal. opic g. St. X. to rect. Op. Longiflorum to extend from the coccygeus cords to the pubis. The vomits were followed by the hæmorrhoid effect, much relief was obtained during the night, but then the mortification next morning to find the disease still unrelieved; his skin was very hot & dry, his pulse very quick and the stools very frequent. He was again immured in the incubating bath and kept there for ten minutes, then wrapped in flannels and hot bricks applied to his feet, giving internally 25 of the following diaphoretic mixture every half hour. Op. Spt.

Mr. Baker aged 20, a man of good build, aged 30, was admitted into my hospital on the 2^d of August, he had sneezed profusely, and was much relieved. The cold was repeated at night, and he escaped the paroxysm. The next day his bowel complaint was almost relieved; the skin quite normal, the pulse much less frequent and weak, the stools were yet greenish. Nothing more was ordered him, but a simple emulsion of jalap and the man bath every evening. His bowels gradually returned to their healthy state and in a few days he was quite restored! —

Cases of Diphtheria.

I have already so far transgressed the limits to which it was intended to extend the scope that I can the patience of my reader is well nigh exhausted; will therefore very briefly mention the more striking symptoms previous to death.

about 25th Present case Posterior aged 16 months, has not long since been taken from the breast; she was first attacked with Cholera infantum about a fortnight ago. The urgent symptoms have several times been removed, but from being confined in a crowded nursery, containing 37 children she has as often relapsed. She came under my care for the first time this day is considerably convalescent, very emaciate, appears not to notice those around her. Her head, chest and abdomen are very hot, extremities cold, pulse frequent and irritated; urine very dark, several teeth just emerged from the alveoli; tongue elevated in several spots and covered with a white scurf as in rach. The ^{nurse} informs me that the stools are

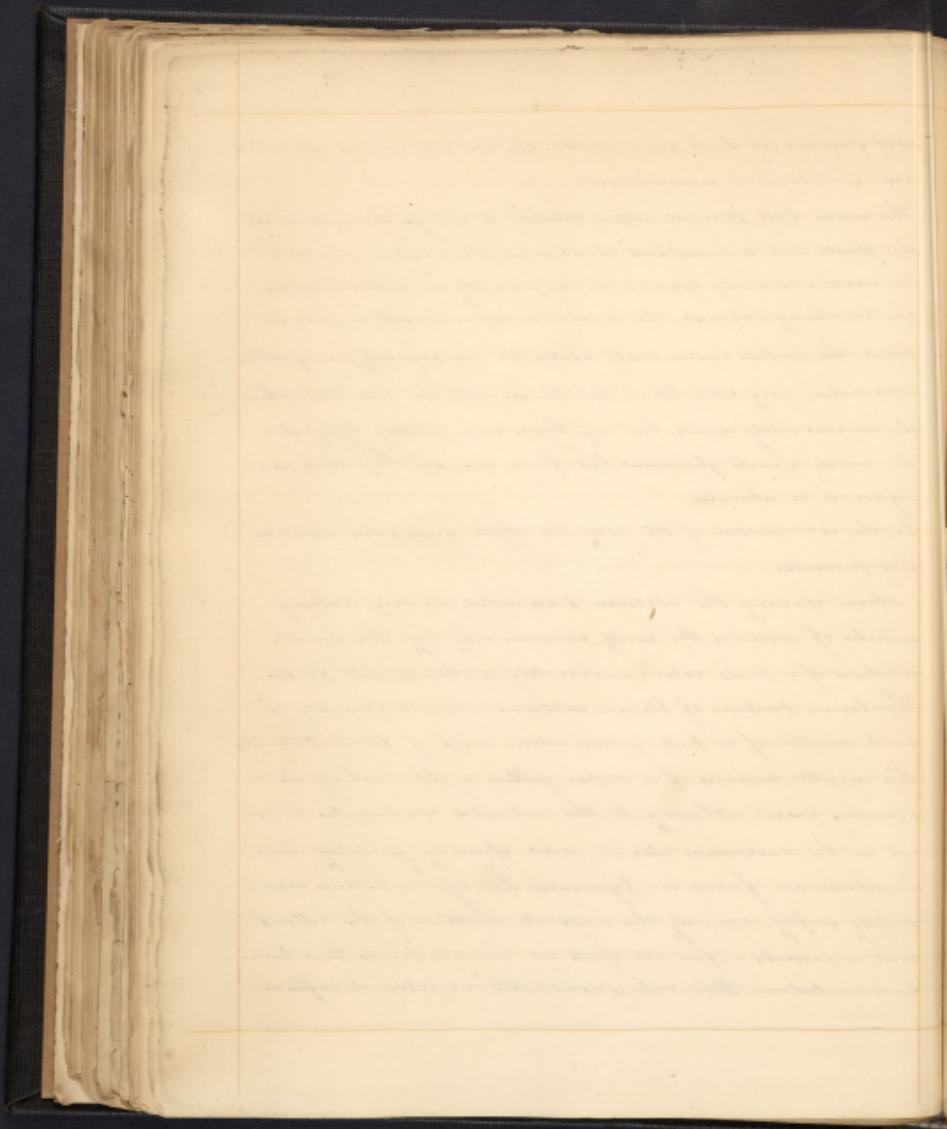


very frequent, of dark green matter. she has not vomited for several days, will take no nourishment.

The warm bath, flannel rollers, external to change the nature of the stools and a demulcent drink were the remedies resorted to. The next morning spurns her, apparently in articulate moans, her breathing laboured, the corner overspread with a yellowish fluid, the pupils enormously dilated, the respiration perceptible, extremitie very cold. I had her placed into the hot bath when she immediately rallied, but my hopes were quickly disappointed, the oral fluids glistened but for a moment then sunk never again to be rekindled.

In the examination of the body the appearance were noted as they presented.

Upon opening the abdomen I discerned no very striking marks of disease, the cavity uncommonly dry. The small intestines of a pale colour more or less distended with feces. The lower portion of ileum contains a small quantity of thick matter of a pale yellow colour void of feculent consistence this matter becomes of a deeper yellow in approaching the duodenum, viscic, adhering to the valvulae conniventes. It extends in the duodenum also in more sparing quantity. Two leucorrhœas are found in jejunum. Large intestines completely empty, scarcely the natural moisture of the villous coat is present, a few red spots in various parts. Two leucorrhœas in colon. Stomach is contracted, no external inflam-



mation discoverable; contains y^e light coloured fluid, internally the strongest marks of inflammation and irritation are present, the villous coat is of a deep red or purplish colour; this inflammation is confined exclusively to the stomach; to my surprise the muscle is perfectly free of it. The liver entirely natural in colour, of uniform texture and not increased in size. The gall bladder contains a quantity of dark, thick and viscid bile. Spleen and pancreas natural, as also the contents of the thorax. After sawing through the cranium we experience much difficulty in separating the dura mater from the internal table on account of the strong adhesion. Coagulated lymph adheres on the surface of the dura mater, the vessels of the pia mater turgid. The ventricles contain about y^e gill of bloody serum.

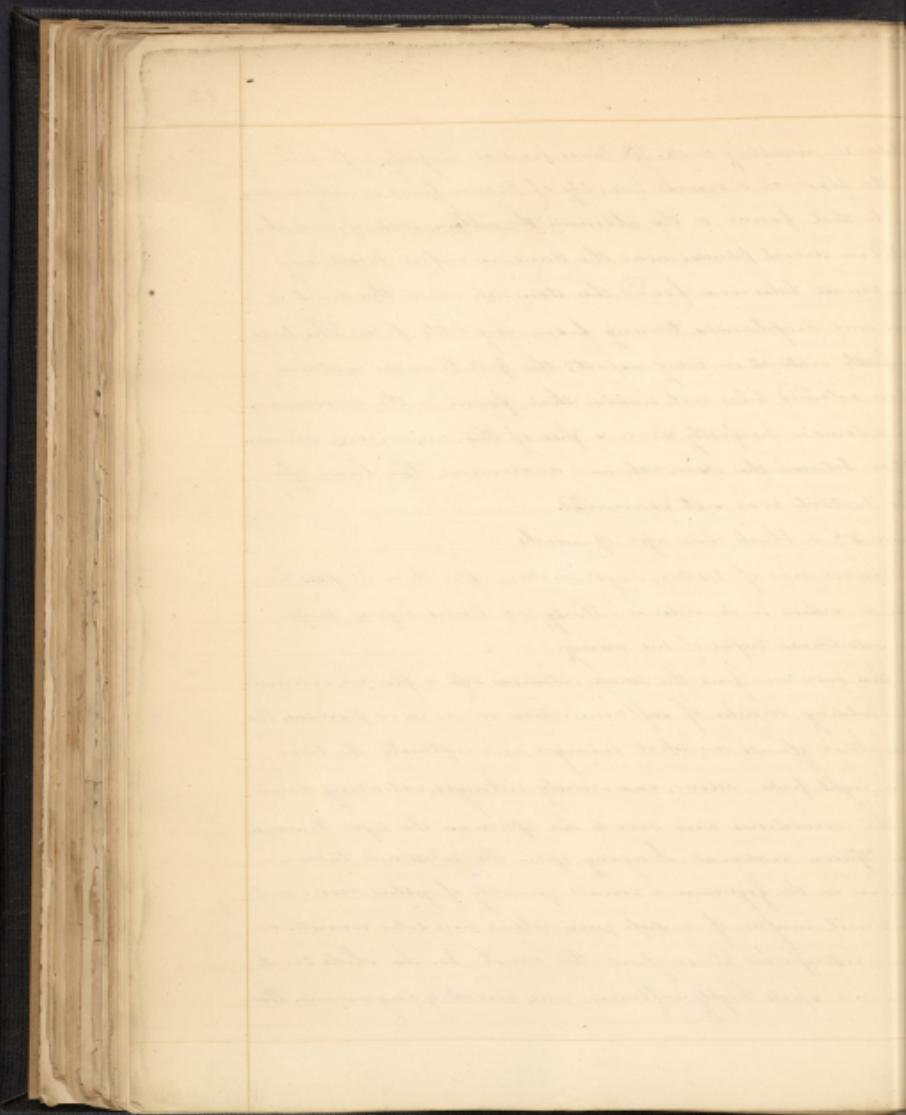
Case 20^o a black child aged two years.
The disease had existed twelve days. Calomel, the warm bath, blisters and stimulants had been administered, but in vain. appearance on dissection. All the viscera of the abdomen perfectly invested of a friable matter; the small intestines pale, flaccid and contractile, adhering together about y^e gill of dark, copper coloured fluid loose in the cavity of the abdomen. Large intestine distended with flatos. Upon opening the small intestines found their upper thick columns with orange yellow bile, the duodenum is tinged with the same. The stomach entirely empty and colourless. In the large intestine a small quantity of light yellow fluid, mixed with pieces of solid

substance resembling bark. The lower portion slightly inflamed.
 In the stomach a small quantity of brown fluid exactly similar
 to that found in the abdomen; the villous coat appears ab-
 sorbed in several places; near the Cardiac orifice posteriorly
two small holes were found, the stomach about this part is
 thin and translucent, tearing from very little force. The liver
 perfectly natural in every respect, the gall bladder contains
 olive colored bile not unlike that found in the duodenum;
 the pilorus is perfectly clean & free of this, an evident demar-
 cation between the stomach and duodenum. The head of
 this patient was not examined.

Case 5th a black child aged 19 months.

The disease was of sixteen days' duration, after three days he
 fell a victim to its violence. Thirty six hours before death
 we entertained hopes of his recovery.

In this case we find the entire intestines soft & flaccid, externally
 exhibiting marks of inflammation in various portions, the
 mesenteric glands somewhat enlarged are inflamed. The liver
 of a light pale colour, enormously enlarged, extending down
 to the umbilicus and over to the epigastric the left Pancreas
 and Spleen natural. Laying open the intestinal tube we
 observe in the lumen a small quantity of yellow viscous mucus,
 small masses of a dark green colour and solid consistency
 being interposed throughout the canal. In the whole tract
 there are spots highly inflamed and almost gangrenous. The



large intestines entirely empty, the walls of the rectum slightly inflamed and thickened. The stomach contains a very small quantity of light flatus, the intestines about inflamed in spots, though not so much as in the foregoing case. The duodenum slightly inflamed, containing no bile but about $\frac{5}{6}$ of light colored mucus. The Gall Bladder contains thin transparent bile much lighter colored than natural. On the surface of the brain much coagulated lymph, reflects distended, and about 37 serum in the ventricles.

In concluding this paper I cannot refrain expressing the conviction of my inability to do justice to so important and interesting a subject. I have with great diffidence ventured to differ in some incon siderable points from long established opinions. I ought perhaps to offer an apology for the simplicity of style in which these observations have been made, as true the object represents often prompted to the expression of sensibility and sympathy for their sufferings, but I aspire not to the reputation of an author but of an humble adherent to truth.

